

AMENDMENTS TO THE CLAIMS

Please enter the claim amendments as shown below. The instant claim set replaces all previous versions.

1-14. (Canceled)

15. (New) A magnetic cell comprising:

a cell;

a magnetic particle comprising a magnetic material; and

a peptide which has an amino acid sequence comprising RGDS or GRGDS, and which has an adhesive activity for a cell surface molecule of the cell,

wherein the magnetic particle is coated with the peptide.

16. (New) The magnetic cell according to claim 15, wherein the cell is selected from the group consisting of:

a cultured chondrocyte, a mesenchymal cell, a lymphocyte, a neural stem cell and a cell which expresses integrin.

17. (New) The magnetic cell according to claim 15 or 16, wherein the magnetic particle further comprises a drug.

18. (New) The magnetic cell according to claim 15 or 16, wherein the magnetic material is coated with the peptide at a ratio of from 3 ng to 6.6 µg of the peptide to 1 mg of the magnetic particle.

19. (New) The magnetic cell according to claim 18, wherein the magnetic particle further comprises a drug.

20. (New) A culture of magnetic cells, wherein the magnetic cell comprises:
a cell;
a magnetic particle comprising a magnetic material; and
a peptide which has an amino acid sequence comprising RGDS or GRGDS, and which has an adhesive activity for a cell surface molecule of the cell,
wherein the magnetic particle is coated with the peptide.
21. (New) The culture of magnetic cells according to claim 20, wherein the cell is selected from the group consisting of:
a cultured chondrocyte, a mesenchymal cell, a lymphocyte, a neural stem cell and a cell which expresses integrin.
22. (New) The culture of magnetic cells according to claim 20 or 21, wherein the magnetic material is coated with the peptide at a ratio of from 3 ng to 6.6 μ g of the peptide to 1 mg of the magnetic particle.
23. (New) The culture of magnetic cells according to claim 22, wherein the magnetic cell is grown *in vitro* for up to 21 days.
24. (New) A method for localizing a magnetic cell to a site in a subject, the method comprising:
administering a magnetic cell into a subject having a disease or a lesion, wherein the magnetic cell comprises a cell, a magnetic particle comprising a magnetic material, and a peptide which has an amino acid sequence comprising RGDS or GRGDS, and which has an adhesive activity for a cell surface molecule of the cell, wherein the magnetic particle is coated with the peptide; and
applying a magnetic field at or near a site of the disease or the lesion so as to localize the magnetic cell at or near the site in the subject, wherein the magnetic field is applied outside the body of the subject, or by embedding a magnet inside the body of the subject.

25. (New) The method according to claim 24, wherein the cell is selected from the group consisting of a cultured chondrocyte, a mesenchymal cell, a lymphocyte, a neural stem cell and a cell which expresses integrin.

26. (New) The method according to claim 24 or 25, wherein the magnetic particle further comprises a drug.

27. (New) The method according to claim 24 or 25, wherein the magnetic material is coated with the peptide at a ratio of from 3 ng to 6.6 μ g based on 1 mg of the magnetic particle.

28. (New) The method according to claim 27, wherein the magnetic particle further comprises a drug.

29. (New) The method according to claim 24, further comprising retaining the magnetic cell at or near the site of the disease or the lesion for a period of 1-90 days.

30. (New) The method according to claim 29, wherein the cell is selected from the group consisting of a cultured chondrocyte, a mesenchymal cell, a lymphocyte, a neural stem cell and a cell which expresses integrin.

31. (New) The method according to claim 29 or 30, wherein the magnetic particle further comprises a drug.

32. (New) The method according to claim 29 or 30, wherein the magnetic material is coated with the peptide at a ratio of from 3 ng to 6.6 μ g based on 1 mg of the magnetic particle.

33. (New) The method according to claim 32, wherein the magnetic particle further comprises a drug.

34. (New) A method for controlling the activity of a magnetic cell, the method comprising:
administering a magnetic cell into a subject having an injury or lesion, wherein the magnetic cell comprises a cell, a magnetic particle comprising a magnetic material, a linker, and a drug for controlling the activity of the magnetic cell;
applying a magnetic field at or near a site of the injury or lesion in the subject, and
releasing the drug at or near the site so as to control the activity of the magnetic cell in the subject.

35. (New) The method of claim 34, wherein the linker comprises a peptide.

36. (New) The method of claim 35, wherein the peptide has an amino acid sequence comprising RGDS or GRGDS.

37. (New) The method of claim 34, wherein the drug is contained in the magnetic particle of the magnetic cell.

38. (New) The method of claim 34, wherein the drug is contained in a magnetic particle.

39. (New) The method of claim 38, wherein the magnetic cell and the magnetic particle containing the drug are administered to the subject simultaneously.

40. (New) The method of claim 38, wherein the magnetic cell and the magnetic particle containing the drug are administered to the subject separately.

41. (New) The method according to any one of claims 34-40, wherein the activity of the magnetic cells is differentiation of the magnetic cell.

42. (New) The method according to any one of claims 34-40, wherein the activity of the magnetic cells is proliferation of the magnetic cell.

43. (New) A method for inducing tissue repair in a subject, the method comprising:
administering a magnetic cell into a subject in need of a tissue repair, wherein the magnetic cell comprises a cell, a magnetic particle comprising a magnetic material, and a linker;
applying a magnetic field at or near a site of the tissue repair in the subject so as to retain the magnetic cell at or near the site of the tissue to be repaired, in an amount or duration sufficient to induce tissue repair.
44. (New) The method of claim 43 wherein the linker comprises a peptide.
45. (New) The method of claim 44 wherein the peptide has an amino acid sequence comprising RGDS or GRGDS.
46. (New) The method of claim 43 wherein the magnetic cells is selected from the group consisting of:
a cultured chondrocyte, a mesenchymal cell, a lymphocyte, a neural stem cell and a cell which expresses integrin.
47. (New) The method according to claim 43-46, further comprising administering a drug.
48. (New) The method of claim 43-46, wherein the magnetic material is coated with the peptide at a ratio of from 3 ng to 6.6 μ g based on 1 mg of the magnetic particle.
49. (New) The method of claim 48, further comprising administering a drug.
50. (New) The method according to claim 47, wherein the drug is contained in the magnetic particle of the magnetic cell.

51. (New) The method according to claim 47, wherein the drug is contained in a second magnetic particle.
52. (New) The method according to claim 51, wherein the magnetic cell and the second magnetic particle containing the drug are administered to the subject simultaneously.
53. (New) The method according to claim 51, wherein the magnetic cell and the second magnetic particle containing the drug are administered to the subject separately.
54. (New) The method according to claim 49, wherein the drug is contained in the magnetic particle of the magnetic cell.
55. (New) The method according to claim 49, wherein the drug is contained in a second magnetic particle.
56. (New) The method of claim 55, wherein the magnetic cell and the second magnetic particle containing the drug are administered to the subject simultaneously.
57. (New) The method of claim 55, wherein the magnetic cell and the second magnetic particle containing the drug are administered to the subject separately.
58. (New) A method for treating a tumor in a subject, the method comprising:
administering a magnetic cell to a subject having a tumor, wherein the magnetic cell comprises a cell; a magnetic particle comprising a magnetic material; a peptide which has an amino acid sequence comprising RGDS or GRGDS, and which has an adhesive activity for a cell surface molecule of the cell, wherein the magnetic particle is coated with the peptide; and an anti-cancer drug; and
applying a magnetic field to the subject so as to localize the magnetic cell at or near the site of the tumor in the subject, in an amount and duration effective to treat the tumor.

59. (New) The method according to claim 58, wherein the magnetic field is applied outside the body of the subject.

60. (New) The method according to claim 58, wherein the magnetic field is applied by embedding a magnet inside the body of the subject.

61. (New) The method according to any one of claims 58-60, wherein the anti-cancer drug is selected from the group consisting of:

irinotecan hydrochloride trihydrate, mitomycin C, 5-fluorouracyl, cisplatin, gemcitabine hydrochloride, doxorubicin and taxol.

62. (New) A method for treating dementia in a subject, the method comprising:

administering a magnetic cell to a subject having dementia, wherein the magnetic cell comprises a cell, a magnetic particle comprising a magnetic material and a linker; and

applying a magnetic field to a region of the brain of the subject, in an amount and duration effective to treat the dementia.

63. (New) The method according to claim 62, wherein the cell is a neural stem cell or a cell which expresses integrin.

64. (New) The method according to claim 62, wherein the linker comprises a peptide comprising RGDS or GRGDS.

65. (New) The method according to any one of claims 62-64, wherein the magnetic cell further comprises a dementia therapeutic agent.